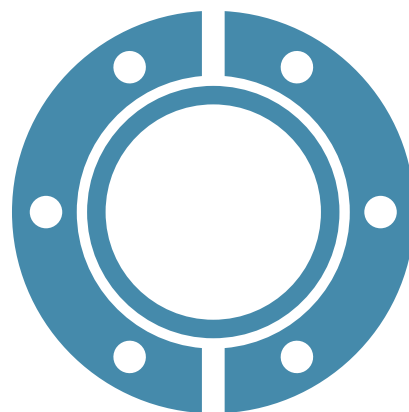




VACUUM CF COMPONENTS

- Seals, Nuts and Bolts Sets.....F 03

The CF series flanges use the well proven captured copper gasket sealing principle which is now almost universally used in the UHV industry. The seal - an OFHC* copper gasket - is held between the knife edges of a pair of CF flanges. On tightening the retaining bolts, the knife edges cut into the gasket and force the copper both axially as well as radially outwards to the flange. The material is thus enclosed and cannot flow, even at high bakeout temperatures. This sealing method has a maximum bakeout temperature of 450°C and is suitable for vacuum applications to 10^{-12} mbar.

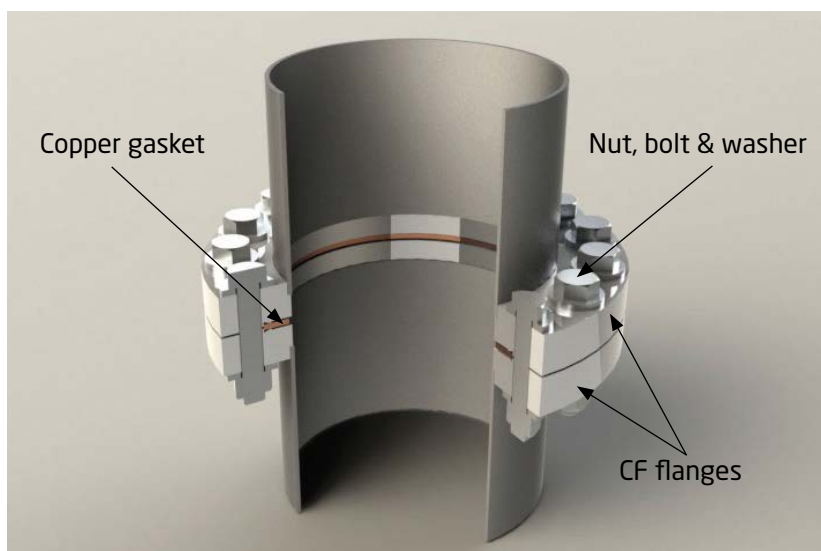
All CF flanges are manufactured from specially selected, high quality Stainless Steel - 304L** (1.4306) or the higher specification 316LN (1.4429). These materials being the accepted standards throughout the UHV vacuum industry. Both Stainless Steels are low carbon varieties designed to avoid inter-granular corrosion after welding. 316LN has the additional advantages of a lower magnetic permeability, harder knife edge, and high temperature H₂ degassing at up to 950°C. Full traceability is available on all materials used.

Protective mouldings and suitable packing ensures that the flanges reach the customer in perfect condition for use on UHV equipment. The product range includes blank, bored and rotatable flanges in all of the internationally approved sizes. Other sizes and special flanges are available to order.

All given dimensions are nominal in mm.

*OFHC: Oxygen-free high conductivity.

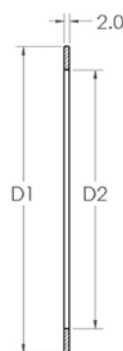
**316L (1.4404) available on request.



Seals, Nuts and Bolts Sets

CF COPPER GASKETS - OFHC COPPER

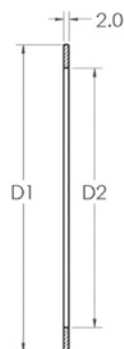
P/N	DN	FOR FLANGE OD	D1	D2	PACK SIZE
CU16	16	34	21	16	10
CU25	25	54	33	25	10
CU35	40	70	48	37	10
CU39	40	70	48	39	10
CU50	50	86	61	51	10
CU63	63	114	82	63	10
CU72	63	114	82	72	10
CU100	100	152	120	101	10
CU150	150	203	171	152	5
CU200	200	254	222	203	5
CU250	250	304	270	254	5
CU272	250	304	272	254	5



Oxygen free high conductivity (OFHC) copper is a suitable sealing material for bakeable UHV systems because of its good conformity with the thermal expansion coefficient of Stainless Steel as well as its essentially lower hardness (approx. 85 Brinell).

CF ANNEALED COPPER GASKETS - OFHC COPPER

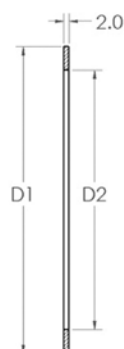
P/N	DN	FOR FLANGE OD	D1	D2	PACK SIZE
CUA16	16	34	21	16	5
CUA35	40	70	48	37	5
CUA63	63	114	82	63	5
CUA100	100	152	120	101	5
CUA150	150	203	171	152	5
CUA200	200	254	222	203	5
CUA250	250	304	270	254	5
CUA272	250	304	272	254	5



The annealed gaskets are recommended for use on viewports, feedthroughs and ionisation gauge heads with glass to metal seals (Hardness approx. 45 Brinell).

CF SILVER PLATED COPPER GASKETS - OFHC COPPER

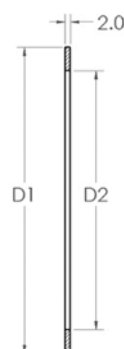
P/N	DN	FOR FLANGE OD	D1	D2	PACK SIZE
CU16SP	16	34	21	16	5
CU25SP	25	54	33	25	10
CU35SP	40	70	48	37	5
CU39SP	40	70	48	39	5
CU50SP	50	86	61	51	10
CU63SP	63	114	82	63	5
CU72SP	63	114	82	72	5
CU100SP	100	152	120	101	5
CU150SP	150	203	171	152	5
CU200SP	200	254	222	203	5
CU250SP	250	304	270	254	5
CU272SP	250	304	272	254	5



5 -7 Micron Silver Plating prevents oxidation of the parts exposed to atmosphere during baking.

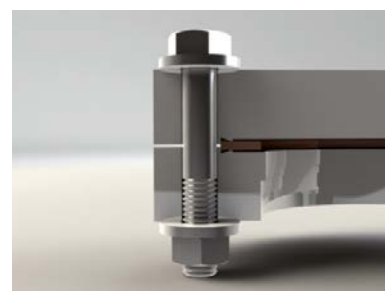
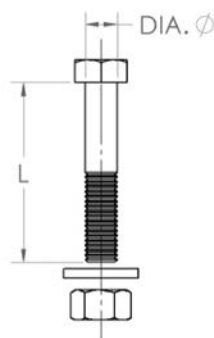
CF SILVER PLATED ANNEALED COPPER GASKETS - OFHC COPPER

P/N	DN	FOR FLANGE OD	D1	D2	PACK SIZE
CUA16SP	16	34	21	16	5
CUA35SP	40	70	48	37	5
CUA63SP	63	114	82	63	5
CUA100SP	100	152	120	101	5
CUA150SP	150	203	171	152	5
CUA200SP	200	254	222	203	5
CUA250SP	250	304	270	254	5
CUA272SP	250	304	272	254	5



CF NUT BOLT WASHER SET FOR CF FLANGE - STAINLESS STEEL

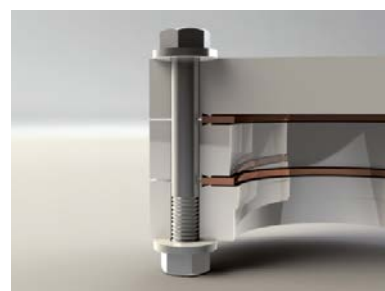
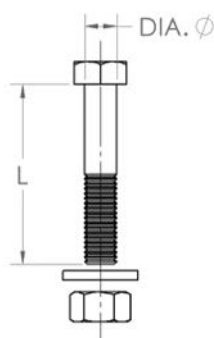
P/N	DN	DIA	L	PACK SIZE
NBW420	16	M4	20	25
NBW635	40	M6	35	25
NBW845	63	M8	45	25
NBW850	100	M8	50	25
NBW860	150	M8	60	25
NBW860	200	M8	60	25
NBW1065	250	M10	65	35



Silver plated bolts are available on request.

CF NUT BOLT WASHER SET FOR DOUBLE SIDED CF FLANGE - STAINLESS STEEL

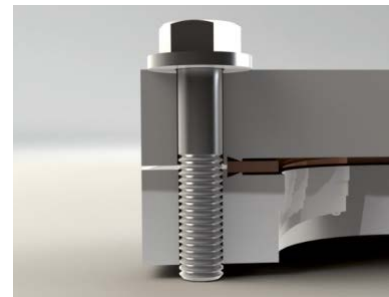
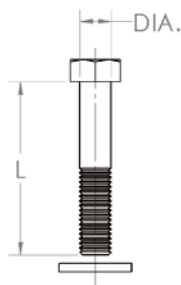
P/N	DN	DIA	L	PACK SIZE
NBW435	16	M4	35	25
NBW650	40	M6	50	25
NBW860	63	M8	60	25
NBW870	100	M8	70	25
NBW880	150	M8	80	25
NBW890	200	M8	90	25
NBW1090	250	M10	90	35



Silver plated bolts are available on request.

CF NUT BOLT WASHER SET FOR TAPPED CF FLANGE - STAINLESS STEEL

P/N	DN	DIA	L	PACK SIZE
BW416	16	M4	16	25
BW625	40	M6	25	25
BW830	63	M8	30	25
BW835	100	M8	35	25
BW835	150	M8	35	25
BW845	200	M8	45	25
BW1050	250	M10	50	35



Silver plated bolts are available on request.

CF BLANK OFF KIT OF PARTS - STAINLESS STEEL

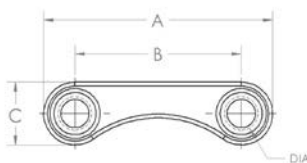
P/N	DN
F16-BLANKOFF	16
F35-BLANKOFF	35
F63-BLANKOFF	63
F100-BLANKOFF	100
F150-BLANKOFF	150
F200-BLANKOFF	200
F250-BLANKOFF	250
F272-BLANKOFF	250

Consist of:
1 x Blank, 1 x Gasket and appropriate quantity of nut, bolts and washers for blanking off ports.



CF PLATE NUT - STAINLESS STEEL

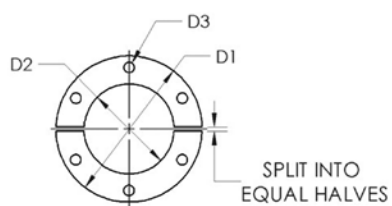
P/N	DN	A	B	C	DIA	QTY
PN16	16	20	13	7	M4	25
PN35	35	41	29	11	M6	25
PN63	63	51	35	12	M8	25
PN100	100	44	25	12	M8	25
PN150	150	44	28	12	M8	25



Used where spanner access to back of flange may be impaired.

CF HORSE SHOE PLATE NUTS - STAINLESS STEEL

P/N	DN	D1	D2	D3
PN16HS	16	34	20	M4
PN35HS	35	70	43	M6
PN63HS	63	114	65	M8
PN100HS	100	152	103	M8
PN150HS	150	203	154	M8



Used to convert a plain flange into a tapped equivalent.



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